

# The Condition of Education 2009

## Indicator 3

### *Knowledge and Skills of Young Children*

The indicator and corresponding tables are taken directly from *The Condition of Education 2009*. Therefore, the page numbers may not be sequential.

Additional information about the survey data and supplementary notes can be found in the full report. For a copy of *The Condition of Education 2009*, visit the NCES website (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009081>) or contact ED PUBS at 1-877-4ED-PUBS.

Suggested Citation:

Planty, M., Hussar, W., Snyder, T., Kena, G., KewalRamani, A., Kemp, J., Bianco, K., Dinkes, R. (2009). *The Condition of Education 2009* (NCES 2009-081). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

*A smaller percentage of children born in 2001 who were in poverty demonstrated proficiency in various cognitive skills at about 2 years old and at about 4 years old than did their peers who were at or above poverty.*

Using the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), this indicator provides information on children when they were infants (at about 9 months old), when they were toddlers (at about 2 years old), and again when they were preschoolers (at about 4 years old). The assessments for 9-month-olds provide information on cognitive skills, including exploration, verbalizations, making simple gestures, and problem solving, and on motor skills, including coordination, sitting, prewalking, standing alone, skillful walking, and balance. The assessments for 2-year-olds provide information on cognitive skills, such as communication, listening comprehension, object discrimination, and knowledge of counting words or quantities; and on motor skills, such as skillful walking, balance, fine motor control, walking up and down stairs, alternating balance, and motor planning. Preschool-age assessments provide information on language, literacy, mathematics, color identification, and fine motor skills.

Nine-month-olds in poverty had lower proficiency levels in three of five cognitive skills, compared with children at or above poverty, although observed differences were less than 4 percentage points. For example, 81 percent of children in poverty were proficient in exploring purposefully, compared with 84 percent of those at or above poverty (see table A-3-1). For motor skills, no measurable differences were found between 9-month-olds in poverty and those at or above poverty.

In contrast to patterns found among 9-month-olds by poverty status, significant differences in all cognitive skills were found for 2-year-olds. For example, 29 percent of 2-year-olds in poverty demonstrated proficiency in listening comprehension, compared with 39 percent of those at or above poverty, and 55 percent of those in poverty were proficient in expressive vocabulary, compared with 67 percent at or above poverty (see table A-3-2). Concerning proficiency in motor skills among 2-year-olds, however, no measurable differences were found by poverty status.

Differences in proficiency in cognitive skills by poverty status observed when children were 2 years old held when they were 4 years old. Twenty percent of 4-year-olds in poverty were proficient in letter recognition,

compared with 37 percent of their peers at or above poverty (see table A-3-3). Forty-five percent of 4-year-olds in poverty demonstrated proficiency in numbers and shapes, compared with 72 percent of their peers at or above poverty.

For 9-month-olds, there were few differences in cognitive skill proficiencies for most racial/ethnic groups. While differences were found for motor skills among 9-month-olds by race/ethnicity, no single group demonstrated consistently higher proficiency than others across all skills. In contrast, smaller percentages of Black, Hispanic, and American Indian/Alaska Native 2-year-olds demonstrated proficiency in all cognitive skills than did their peers who were White, Asian, or of more than one race. For example, 56 percent of Blacks, 54 percent of Hispanics, and 50 percent of American Indians/Alaska Natives used expressive vocabulary, compared with 71 percent of Whites, 62 percent of Asians, and 64 percent of children of more than one race (see table A-3-2). For motor skills among 2-year-olds, few differences were found by race/ethnicity.

Generally, smaller percentages of Black, Hispanic, and American Indian/Alaska Native 4-year-olds demonstrated proficiency in various cognitive skills than did their peers who were White, Asian, or of more than one race. For example, 28 percent of Blacks, 23 percent of Hispanics, and 19 percent of American Indians/Alaska Natives were proficient at letter recognition, compared with 37 percent of Whites, 49 percent of Asians, and 35 percent of children of more than one race (see table A-3-3). Additionally, smaller percentages of 4-year-old Blacks (55 percent), Hispanics (51 percent), and American Indians/Alaska Natives (40 percent) showed proficiency in numbers and shapes, compared with Whites (73 percent), Asians (81 percent), and children of more than one race (65 percent).



**For more information:** *Tables A-3-1 through A-3-3; Indicator 2*

**Glossary:** *Cognitive development, Motor development*  
NCES 2009-020, Tables 112–114

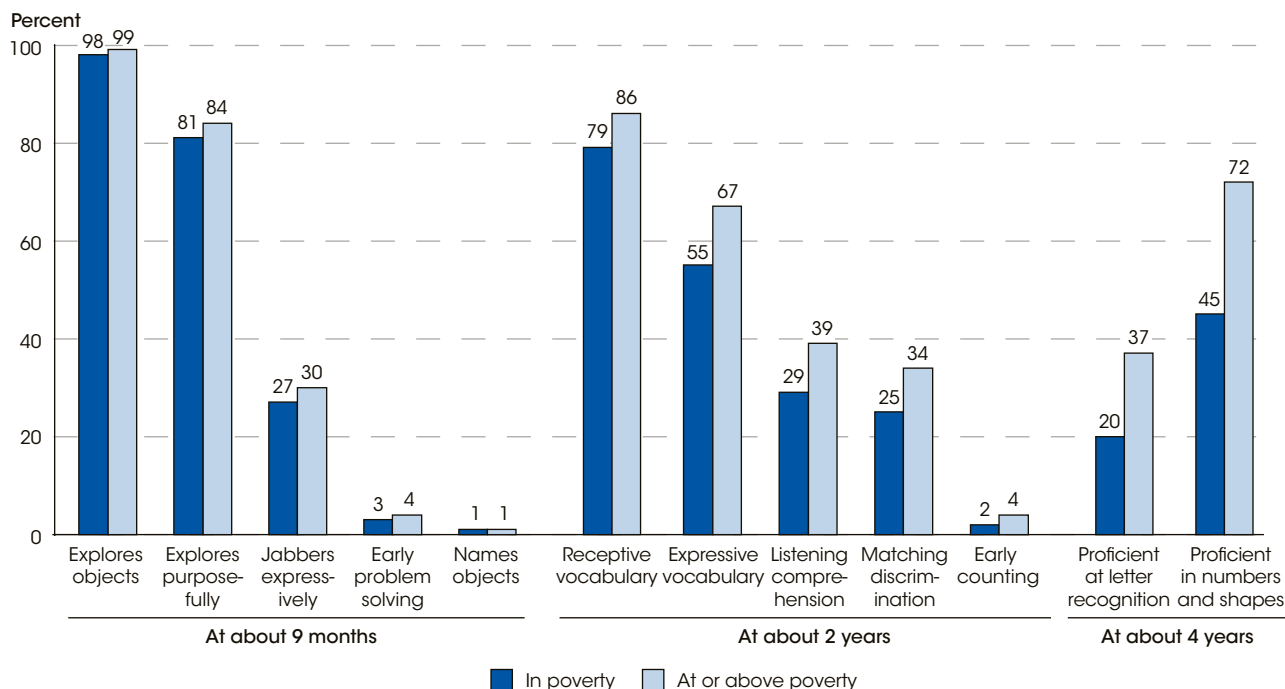
Bayley, N. (1993)

## Technical Notes

Percentages presented reflect children who demonstrated mastery or “proficiency” by achieving a set threshold within a subscale measuring specific skills or abilities. Race categories exclude persons of Hispanic ethnicity.

For more information on race/ethnicity, socioeconomic status, and poverty, see *supplemental note 1*. For more information on the ECLS-B, see *supplemental note 3*.

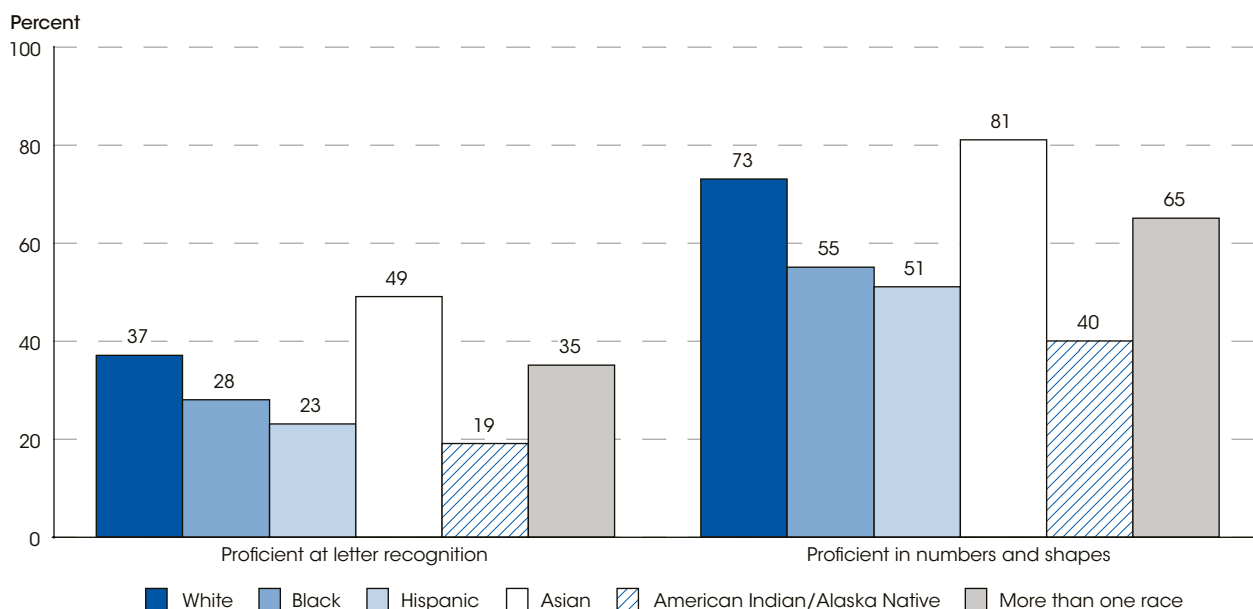
**Figure 3-1. Percentage of children demonstrating proficiency in various cognitive skills, by poverty status and age:** 2001-02, 2003-04, and 2005-06



NOTE: Percentages reflect children who demonstrated mastery or "proficiency" by achieving a set threshold within a subscale measuring specific skills or abilities. The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) sampled children born in 2001. While ECLS-B assessed some infants as young as 6 months and as old as 22 months, estimates reflect information collected on infants around 9 months old (8 to 10 months). Estimates for 2-year-olds pertain to children assessed between 22 and 25 months old. Estimates for 4-year-olds pertain to children assessed between 48 and 57 months old. For more information on poverty, see *supplemental note 1*, and for more information on ECLS-B, see *supplemental note 3*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Longitudinal 9-month-2-year Restricted-Use Data File and Longitudinal 9-month-Preschool Restricted-Use Data File.

**Figure 3-2. Percentage of children proficient in letter recognition and numbers and shapes at about 4 years old, by race/ethnicity: 2005-06**



NOTE: Percentages reflect children who demonstrated mastery or "proficiency" by achieving a set threshold within a subscale measuring specific skills or abilities. The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) sampled children born in 2001. Estimates for 4-year-olds pertain to children assessed between 48 and 57 months old. Data on Pacific Islanders are not shown as reporting standards were not met. For more information on race/ethnicity, see *supplemental note 1*, and for more information on ECLS-B, see *supplemental note 3*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Longitudinal 9-month-Preschool Restricted-Use Data File.

# Knowledge and Skills of Young Children

**Table A-3-1. Percentage of children demonstrating proficiency in various cognitive and motor skills at about 9 months old, by selected child and family characteristics: 2001-02**

Characteristic	Percent of children demonstrating proficiency in cognitive skills				
	Explores objects	Explores purposefully	Jabbers expressively	Early problem solving	Names objects
<b>Total</b>	<b>98.6</b>	<b>83.2</b>	<b>29.6</b>	<b>3.7</b>	<b>0.6</b>
Sex					
Male	98.6	82.7	28.8	3.5	0.6
Female	98.7	83.8	30.4	3.9	0.7
Race/ethnicity <sup>1</sup>					
White	98.8	84.0	30.4	3.9	0.7
Black	98.1	80.8	27.9	3.4	0.6
Hispanic	98.5	82.9	29.0	3.4	0.6
Asian	98.8	83.3	28.2	3.1	0.5
Pacific Islander	98.9	81.8	23.7	2.0	0.3
American Indian/Alaska Native	98.4	80.3	27.3	3.4	0.6
More than one race	98.6	82.8	29.5	3.8	0.8
Primary type of care arrangement <sup>2</sup>					
No regular nonparental arrangement	98.5	82.4	28.7	3.4	0.6
Home-based care					
Relative care	98.8	84.3	30.6	3.9	0.7
Nonrelative care	98.8	84.7	31.3	4.2	0.8
Center-based care	98.6	82.8	29.3	3.5	0.6
Multiple arrangements	98.3	78.6	25.0	2.7	0.4
Parents' highest level of education					
Less than high school	98.4	80.1	26.0	2.8	0.5
High school diploma or equivalent	98.4	82.6	29.2	3.6	0.7
Some college	98.7	84.4	30.8	3.9	0.7
Bachelor's degree	98.8	83.9	30.2	3.8	0.7
Any graduate education	98.8	84.1	30.5	3.9	0.7
Mother's employment status					
Full-time (35 hours or more)	98.7	83.9	30.1	3.8	0.7
Part-time (less than 35 hours)	98.9	85.3	31.7	4.2	0.8
Looking for work	98.5	81.7	27.7	3.1	0.5
Not in labor force	98.4	82.0	28.5	3.4	0.6
No mother in household	98.6	79.5	25.1	2.5	0.4
Poverty status					
In poverty	98.3	80.9	27.1	3.1	0.5
At or above poverty	98.7	84.0	30.4	3.8	0.7
Socioeconomic status (SES) <sup>3</sup>					
Lowest 20 percent	98.3	81.1	27.2	3.1	0.5
Middle 60 percent	98.6	83.4	30.0	3.8	0.7
Highest 20 percent	98.8	84.8	30.6	3.8	0.6

See notes at end of table.

**Table A-3-1. Percentage of children demonstrating proficiency in various cognitive and motor skills at about 9 months old, by selected child and family characteristics: 2001-02—Continued**

Characteristic	Percent of children demonstrating proficiency in motor skills					
	Eye-hand coordination	Sitting	Pre-walking	Stands alone	Skillful walking	Balance
<b>Total</b>	<b>89.1</b>	<b>86.8</b>	<b>64.7</b>	<b>18.6</b>	<b>8.4</b>	<b>1.7</b>
Sex						
Male	89.3	87.0	65.1	18.5	8.3	1.7
Female	88.9	86.6	64.4	18.7	8.4	1.8
Race/ethnicity <sup>1</sup>						
White	88.7	86.5	63.7	18.0	8.1	1.6
Black	91.1	88.6	69.8	22.9	10.4	2.6
Hispanic	88.4	86.1	63.4	17.0	7.8	1.6
Asian	89.4	87.1	65.0	18.1	8.1	1.6
Pacific Islander	95.4	93.0	79.9	34.6	15.0	3.9!
American Indian/Alaska Native	90.2	87.8	66.7	19.6	8.5	1.5
More than one race	90.3	88.1	68.2	22.1	9.6	2.0
Primary type of care arrangement <sup>2</sup>						
No regular nonparental arrangement	88.2	86.0	63.1	17.7	8.0	1.6
Home-based care						
Relative care	90.3	87.9	67.4	20.4	9.2	2.0
Nonrelative care	89.9	87.5	66.0	19.2	8.6	1.8
Center-based care	89.0	86.7	64.0	18.0	8.3	1.9
Multiple arrangements	87.1	84.9	61.6	13.6	6.2	0.8
Parents' highest level of education						
Less than high school	88.9	86.5	64.4	17.4	8.1	1.7
High school diploma or equivalent	89.6	87.3	66.9	20.7	9.1	1.9
Some college	90.0	87.7	66.7	20.6	9.2	2.0
Bachelor's degree	88.2	86.0	62.4	16.2	7.4	1.4
Any graduate education	87.5	85.4	60.5	15.2	7.0	1.3
Mother's employment status						
Full-time (35 hours or more)	89.9	87.6	66.4	19.3	8.7	1.8
Part-time (less than 35 hours)	89.7	87.5	66.1	19.5	8.7	1.8
Looking for work	89.7	87.3	66.5	19.6	8.9	2.0
Not in labor force	87.9	85.8	62.4	17.4	7.9	1.6
No mother in household	92.6	89.8	70.0	20.5!	9.0	1.6!
Poverty status						
In poverty	89.1	86.8	65.5	19.2	8.7	1.9
At or above poverty	89.1	86.8	64.5	18.4	8.3	1.7
Socioeconomic status (SES) <sup>3</sup>						
Lowest 20 percent	89.1	86.7	65.3	18.5	8.4	1.8
Middle 60 percent	89.4	87.2	65.6	19.7	8.8	1.9
Highest 20 percent	88.0	85.8	61.6	15.6	7.1	1.3

! Interpret data with caution (estimates are unstable).

<sup>1</sup> Race categories exclude persons of Hispanic ethnicity.

<sup>2</sup> The parent questionnaire at about 9 months old asked whether care arrangements were home- or center-based, or a combination of both. Information about Head Start enrollment was not obtained until the 2- and 4-year-old follow-ups.

<sup>3</sup> Children are grouped into quintiles and classified into low, middle, and high SES based on a standardized composite index score of their parents' education level, mother's and father's occupation, and family's income. See glossary for a definition of socioeconomic status.

NOTE: Percentages reflect children who demonstrated mastery or "proficiency" within a subscale measuring specific skills. The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) sampled children born in 2001. While ECLS-B assessed some infants as young as 6 months and as old as 22 months, the estimates reflect information collected on infants around 9 months old (8 to 10 months). For more information on race/ethnicity, parents' education, SES, and poverty, see *supplemental note 1*. For more information on ECLS-B, see *supplemental note 3*. See glossary for definitions of cognitive development and motor development.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Longitudinal 9-month–2-year Restricted-Use Data File and Longitudinal 9-month–Preschool Restricted-Use Data File.

# Supplemental Tables to Indicator 3

## Knowledge and Skills of Young Children

**Table A-3-2. Percentage of children demonstrating proficiency in various cognitive and motor skills at about 2 years old, by selected child and family characteristics: 2003-04**

Characteristic	Percent of children demonstrating proficiency in cognitive skills				
	Receptive vocabulary	Expressive vocabulary	Listening comprehension	Matching discrimination	Early counting
<b>Total</b>	<b>84.5</b>	<b>63.9</b>	<b>36.6</b>	<b>31.9</b>	<b>3.9</b>
Sex					
Male	81.4	59.2	32.9	28.4	3.0
Female	87.8	68.8	40.6	35.5	4.8
Race/ethnicity <sup>1</sup>					
White	88.7	70.8	42.2	37.1	5.2
Black	79.4	55.7	29.9	25.5	2.2
Hispanic	78.3	53.7	28.2	24.1	1.9
Asian	82.6	62.0	35.4	30.7	3.7
Pacific Islander	78.9	54.2	27.8	23.2	1.1!
American Indian/Alaska Native	74.9	49.9	25.5	21.7	1.4
More than one race	85.0	64.5	37.0	32.2	3.7
Primary type of care arrangement					
No regular nonparental arrangement	83.4	62.0	34.8	30.2	3.3
Home-based care					
Relative care	83.2	61.6	34.7	30.1	3.6
Nonrelative care	86.7	67.7	39.8	34.8	4.4
Center-based care <sup>2</sup>	87.5	69.4	41.6	36.7	5.5
Multiple arrangements	81.7	63.1	38.0	33.8	6.2!
Parents' highest level of education					
Less than high school	76.5	50.4	25.4	21.5	1.2
High school diploma or equivalent	81.9	58.8	32.0	27.4	2.5
Some college	84.5	64.1	36.7	31.8	3.6
Bachelor's degree	88.5	71.0	42.5	37.4	5.3
Any graduate education	90.4	74.7	46.5	41.4	7.1
Mother's employment status					
Full-time (35 hours or more)	85.6	65.8	38.2	33.4	4.2
Part-time (less than 35 hours)	86.6	67.6	39.7	34.8	4.7
Looking for work	80.1	56.6	30.2	25.8	1.9
Not in labor force	83.1	61.6	34.7	30.1	3.4
No mother in household	79.3	54.8	30.5	26.8	5.1!
Poverty status					
In poverty	78.7	54.6	29.0	24.8	2.1
At or above poverty	86.2	66.7	38.9	34.0	4.4
Socioeconomic status (SES) <sup>3</sup>					
Lowest 20 percent	77.3	51.6	26.4	22.5	1.6
Middle 60 percent	84.5	63.9	36.4	31.5	3.5
Highest 20 percent	91.1	75.4	46.7	41.5	7.0

See notes at end of table.

**Table A-3-2. Percentage of children demonstrating proficiency in various cognitive and motor skills at about 2 years old, by selected child and family characteristics: 2003–04—Continued**

Characteristic	Percent of children demonstrating proficiency in motor skills					
	Skillful walking	Balance	Fine motor control	Uses stairs	Alternating balance	Motor planning
<b>Total</b>	<b>92.6</b>	<b>89.4</b>	<b>55.5</b>	<b>48.1</b>	<b>30.0</b>	<b>10.2</b>
Sex						
Male	92.0	88.4	54.2	46.9	28.7	9.6
Female	93.2	90.5	56.8	49.3	31.3	10.9
Race/ethnicity <sup>1</sup>						
White	92.8	89.9	55.8	48.4	30.2	10.4
Black	93.3	90.6	58.0	50.2	32.5	11.2
Hispanic	91.6	87.9	53.5	46.3	28.2	9.4
Asian	92.4	89.2	54.8	47.5	29.3	9.9
Pacific Islander	92.8	90.0	54.0	46.5	27.3	8.9
American Indian/Alaska Native	92.3	89.0	55.0	47.8	29.8	10.2
More than one race	92.4	89.1	54.5	47.2	28.9	9.7
Primary type of care arrangement						
No regular nonparental arrangement	92.2	88.8	54.5	47.2	29.0	9.7
Home-based care						
Relative care	92.7	89.7	55.8	48.3	30.1	10.3
Nonrelative care	93.3	90.6	57.1	49.5	31.5	10.8
Center-based care <sup>2</sup>	93.0	90.2	56.9	49.5	31.8	11.2
Multiple arrangements	91.3	87.1	52.4	45.8	27.9	9.8
Parents' highest level of education						
Less than high school	91.2	87.2	52.7	45.6	27.4	9.0
High school diploma or equivalent	92.4	89.2	55.2	47.8	29.7	10.0
Some college	92.6	89.4	55.6	48.2	30.2	10.4
Bachelor's degree	93.2	90.5	56.6	49.1	30.9	10.7
Any graduate education	93.0	90.2	56.5	48.9	30.8	10.6
Mother's employment status						
Full-time (35 hours or more)	93.0	90.1	56.7	49.1	31.2	10.8
Part-time (less than 35 hours)	92.8	89.8	55.5	48.1	29.8	10.1
Looking for work	92.0	88.4	53.8	46.7	28.5	9.6
Not in labor force	92.2	88.8	54.7	47.3	29.2	9.9
No mother in household	93.8	91.2	57.5	49.9	31.7	10.7
Poverty status						
In poverty	91.8	88.1	54.1	46.8	28.8	9.6
At or above poverty	92.8	89.8	55.9	48.4	30.3	10.4
Socioeconomic status (SES) <sup>3</sup>						
Lowest 20 percent	91.7	88.0	53.6	46.4	28.2	9.4
Middle 60 percent	92.5	89.4	55.5	48.1	30.0	10.2
Highest 20 percent	93.4	90.8	57.2	49.5	31.5	10.9

! Interpret data with caution (estimates are unstable).

<sup>1</sup> Race categories exclude persons of Hispanic ethnicity.

<sup>2</sup> Head Start is included with center-based care because few children were in Head Start in the 2-year follow-up.

<sup>3</sup> Children are grouped into quintiles and classified into low, middle, and high SES based on a standardized composite index score of their parents' education level, mother's and father's occupation, and family's income. See glossary for a definition of socioeconomic status.

NOTE: Percentages reflect children who demonstrated mastery or "proficiency" within a subscale measuring specific skills. The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) sampled children born in 2001. Estimates for 2-year-olds pertain to children assessed between 22 and 25 months old. For more information on race/ethnicity, parents' education, SES, and poverty, see *supplemental note 1*. For more information on ECLS-B, see *supplemental note 3*. See glossary for definitions of cognitive development and motor development.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Longitudinal 9-month–2-year Restricted-Use Data File and Longitudinal 9-month–Preschool Restricted-Use Data File.

# Knowledge and Skills of Young Children

**Table A-3-3. Average scores for selected language, literacy, mathematics, and motor skills, and percentage of children demonstrating proficiency in selected literacy, mathematics, and color identification skills at about 4 years old, by selected child and family characteristics: 2005-06**

Characteristic	Language knowledge and skills		Literacy knowledge and skills			
	Average receptive vocabulary score <sup>1</sup>	Average expressive vocabulary score <sup>2</sup>	Average overall literacy score <sup>3</sup>	Percent proficient at letter recognition <sup>4</sup>	Average phonological awareness score <sup>5</sup>	Average conventions of print score <sup>6</sup>
<b>Total</b>	<b>8.6</b>	<b>2.4</b>	<b>13.2</b>	<b>32.7</b>	<b>3.3</b>	<b>2.5</b>
Sex						
Male	8.4	2.3	12.7	30.8	3.3	2.4
Female	8.8	2.6	13.7	34.8	3.4	2.6
Race/ethnicity <sup>9</sup>						
White	9.2	2.6	14.2	36.8	3.5	2.7
Black	8.0	2.4	12.0	28.3	3.2	2.3
Hispanic	7.4	2.1	10.7	23.0	3.0	2.0
Asian	7.9	2.1	17.5	49.4	3.9	3.3
Pacific Islander	‡	‡	‡	‡	‡	‡
American Indian/Alaska Native	7.9	2.1	9.6	18.8	2.9	1.8
More than one race	9.0	2.5	13.9	35.4	3.5	2.7
Primary type of care arrangement						
No regular nonparental arrangement	8.1	2.3	11.4	25.6	3.1	2.2
Home-based care						
Relative care	8.3	2.3	11.4	25.8	3.1	2.2
Nonrelative care	8.6	2.5	12.8	31.5	3.3	2.4
Head Start	7.9	2.3	11.2	25.0	3.1	2.1
Other center-based care	9.0	2.6	14.9	39.5	3.6	2.8
Multiple arrangements	8.6	2.5	12.7	30.8	3.3	2.4
Parents' highest level of education						
Less than high school	7.1	1.9	8.9	16.0	2.7	1.7
High school diploma or equivalent	7.9	2.3	10.6	22.8	3.0	2.0
Some college	8.6	2.5	12.4	29.8	3.2	2.4
Bachelor's degree	9.2	2.7	15.4	41.6	3.6	3.0
Any graduate education	9.7	2.7	18.1	51.9	4.0	3.5
Mother's employment status						
Full-time (35 hours or more)	8.6	2.5	13.4	33.6	3.4	2.6
Part-time (less than 35 hours)	8.8	2.5	13.7	34.6	3.4	2.6
Looking for work	7.9	2.2	10.7	23.2	3.0	2.0
Not in labor force	8.6	2.4	13.1	32.5	3.3	2.5
No mother in household	8.2	2.2	10.7	23.4	3.0	2.0
Poverty status						
In poverty	7.7	2.1	9.9	20.1	2.9	1.9
At or above poverty	8.9	2.5	14.2	36.7	3.5	2.7
Socioeconomic status (SES) <sup>10</sup>						
Lowest 20 percent	7.3	2.0	9.2	17.2	2.8	1.7
Middle 60 percent	8.6	2.5	12.7	30.8	3.3	2.4
Highest 20 percent	9.8	2.8	18.0	51.2	4.0	3.4

See notes at end of table.



**Table A-3-3. Average scores for selected language, literacy, mathematics, and motor skills, and percentage of children demonstrating proficiency in selected literacy, mathematics, and color identification skills at about 4 years old, by selected child and family characteristics: 2005–06—Continued**

Characteristic	Mathematics knowledge and skills		Percent scoring 10 out of 10 in color knowledge <sup>4</sup>	Average fine motor skills score <sup>8</sup>
	Average overall mathematics score <sup>7</sup>	Percent proficient in numbers and shapes <sup>4</sup>		
<b>Total</b>	<b>22.8</b>	<b>65.4</b>	<b>63.6</b>	<b>3.4</b>
Sex				
Male	22.3	62.3	61.3	3.1
Female	23.3	68.7	66.1	3.7
Race/ethnicity <sup>9</sup>				
White	24.2	73.1	71.0	3.5
Black	20.6	54.7	55.3	3.2
Hispanic	20.1	51.4	50.2	3.3
Asian	26.3	81.2	70.7	4.5
Pacific Islander	‡	‡	‡	‡
American Indian/Alaska Native	17.6	39.9	43.9	3.0
More than one race	23.0	65.4	63.1	3.5
Primary type of care arrangement				
No regular nonparental arrangement	20.6	53.4	51.6	3.1
Home-based care				
Relative care	20.9	55.4	53.4	3.2
Nonrelative care	23.2	67.6	63.8	3.3
Head Start	20.6	54.7	52.6	3.2
Other center-based care	24.6	75.0	73.5	3.6
Multiple arrangements	22.5	65.3	67.1	3.2
Parents' highest level of education				
Less than high school	17.9	39.5	36.9	3.1
High school diploma or equivalent	19.9	50.5	51.3	3.1
Some college	22.4	64.5	64.5	3.4
Bachelor's degree	25.5	81.0	75.6	3.7
Any graduate education	27.4	86.0	81.0	3.9
Mother's employment status				
Full-time (35 hours or more)	23.3	68.3	67.5	3.5
Part-time (less than 35 hours)	23.4	69.0	63.5	3.5
Looking for work	19.7	47.5	47.1	3.0
Not in labor force	22.4	63.2	62.1	3.3
No mother in household	20.6	53.8	58.7	3.0
Poverty status				
In poverty	18.9	44.8	46.8	3.1
At or above poverty	24.0	71.8	68.8	3.5
Socioeconomic status (SES) <sup>10</sup>				
Lowest 20 percent	18.0	40.1	42.8	3.0
Middle 60 percent	22.6	65.3	63.5	3.4
Highest 20 percent	27.5	87.1	81.7	3.9

‡ Reporting standards not met.

<sup>1</sup> Potential score ranges from 0 to 15.<sup>2</sup> Potential score ranges from 0 to 5.<sup>3</sup> Potential score ranges from 0 to 37.<sup>4</sup> Percentages reflect children who demonstrated mastery or "proficiency" within a subscale measuring specific skills.<sup>5</sup> Potential score ranges from 0 to 8.<sup>6</sup> Potential score ranges from 0 to 8.<sup>7</sup> Potential score ranges from 0 to 44.<sup>8</sup> Potential score ranges from 0 to 7.<sup>9</sup> Race categories exclude persons of Hispanic ethnicity.<sup>10</sup> Children are grouped into quintiles and classified into low, middle, and high SES based on a standardized composite index score of their parents' education level, mother's and father's occupation, and family's income. See glossary for a definition of socioeconomic status.NOTE: The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) sampled children born in 2001. Estimates for 4-year-olds pertain to children assessed between 48 and 57 months old. For more information on race/ethnicity, parents' education, SES, and poverty, see *supplemental note 1*. For more information on ECLS-B, see *supplemental note 3*. See glossary for definitions of cognitive development and motor development.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Longitudinal 9-month–Preschool Restricted-Use Data File.

# Standard Error Tables to Indicator 3

## Knowledge and Skills of Young Children

**Table S-3-1. Standard errors for the percentage of children demonstrating proficiency in various cognitive and motor skills at about 9 months old, by selected child and family characteristics: 2001–02**

Characteristic	Percent of children demonstrating proficiency in cognitive skills				
	Explores objects	Explores purposefully	Jabbers expressively	Early problem solving	Names objects
<b>Total</b>	<b>0.06</b>	<b>0.54</b>	<b>0.57</b>	<b>0.13</b>	<b>0.03</b>
Sex					
Male	0.06	0.51	0.56	0.14	0.03
Female	0.09	0.68	0.71	0.18	0.05
Race/ethnicity					
White	0.07	0.68	0.72	0.17	0.04
Black	0.16	0.92	0.99	0.25	0.07
Hispanic	0.13	0.82	0.84	0.21	0.05
Asian	0.13	0.97	0.93	0.20	0.04
Pacific Islander	0.23	3.53	3.17	0.46	0.07
American Indian/Alaska Native	0.30	2.74	2.52	0.70	0.18
More than one race	0.15	1.30	1.56	0.57	0.22
Primary type of care arrangement					
No regular nonparental arrangement	0.09	0.59	0.55	0.14	0.04
Home-based care					
Relative care	0.08	0.67	0.79	0.22	0.06
Nonrelative care	0.08	0.80	0.99	0.29	0.08
Center-based care	0.19	1.43	1.54	0.39	0.09
Multiple arrangements	0.36	3.50	2.87	0.60	0.11
Parents' highest level of education					
Less than high school	0.11	0.87	0.79	0.20	0.06
High school diploma or equivalent	0.13	0.85	0.78	0.20	0.06
Some college	0.08	0.62	0.72	0.21	0.05
Bachelor's degree	0.07	0.59	0.70	0.20	0.05
Any graduate education	0.11	0.95	0.92	0.22	0.06
Mother's employment status					
Full-time (35 hours or more)	0.09	0.85	0.93	0.23	0.05
Part-time (less than 35 hours)	0.06	0.66	0.81	0.22	0.07
Looking for work	0.10	1.16	0.98	0.21	0.05
Not in labor force	0.11	0.69	0.60	0.16	0.04
No mother in household	0.26	3.75	3.41	0.58	0.10
Poverty status					
In poverty	0.14	0.75	0.79	0.21	0.05
At or above poverty	0.07	0.58	0.63	0.15	0.04
Socioeconomic status (SES)					
Lowest 20 percent	0.13	0.72	0.74	0.18	0.04
Middle 60 percent	0.08	0.64	0.67	0.18	0.05
Highest 20 percent	0.09	0.73	0.78	0.18	0.04

See notes at end of table.

**Table S-3-1. Standard errors for the percentage of children demonstrating proficiency in various cognitive and motor skills at about 9 months old, by selected child and family characteristics: 2001-02—Continued**

Characteristic	Percent of children demonstrating proficiency in motor skills					
	Eye-hand coordination	Sitting	Pre-walking	Stands alone	Skillful walking	Balance
<b>Total</b>	<b>0.26</b>	<b>0.24</b>	<b>0.60</b>	<b>0.50</b>	<b>0.21</b>	<b>0.09</b>
Sex						
Male	0.30	0.27	0.69	0.55	0.23	0.10
Female	0.36	0.33	0.78	0.67	0.29	0.14
Race/ethnicity						
White	0.37	0.34	0.82	0.66	0.27	0.10
Black	0.33	0.32	0.94	1.17	0.59	0.35
Hispanic	0.47	0.43	1.00	0.77	0.32	0.15
Asian	0.54	0.50	1.24	1.01	0.39	0.14
Pacific Islander	0.96	1.11	3.76	8.56	3.84	1.64
American Indian/Alaska Native	0.99	0.91	2.15	2.10	0.81	0.30
More than one race	0.91	0.85	2.13	2.03	0.79	0.31
Primary type of care arrangement						
No regular nonparental arrangement	0.34	0.30	0.70	0.52	0.22	0.10
Home-based care						
Relative care	0.35	0.33	0.84	0.81	0.38	0.19
Nonrelative care	0.45	0.45	1.13	1.34	0.57	0.23
Center-based care	0.77	0.71	1.72	1.51	0.66	0.32
Multiple arrangements	2.67	2.35	4.67	2.60	0.89	0.18
Parents' highest level of education						
Less than high school	0.63	0.58	1.22	0.97	0.42	0.20
High school diploma or equivalent	0.46	0.42	0.94	0.87	0.39	0.20
Some college	0.33	0.31	0.79	0.79	0.34	0.15
Bachelor's degree	0.48	0.42	1.07	0.86	0.34	0.12
Any graduate education	0.58	0.52	1.22	0.91	0.40	0.18
Mother's employment status						
Full-time (35 hours or more)	0.37	0.35	0.94	0.95	0.39	0.16
Part-time (less than 35 hours)	0.44	0.40	1.02	0.89	0.38	0.17
Looking for work	0.69	0.64	1.61	1.48	0.62	0.27
Not in labor force	0.36	0.33	0.72	0.63	0.28	0.14
No mother in household	1.19	1.30	4.29	7.24	2.58	0.74
Poverty status						
In poverty	0.47	0.43	0.98	0.86	0.42	0.24
At or above poverty	0.27	0.25	0.66	0.56	0.23	0.10
Socioeconomic status (SES)						
Lowest 20 percent	0.45	0.43	0.92	0.91	0.38	0.19
Middle 60 percent	0.31	0.29	0.74	0.68	0.28	0.12
Highest 20 percent	0.45	0.40	0.96	0.65	0.28	0.13

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Longitudinal 9-month-2-year Restricted-Use Data File and Longitudinal 9-month-Preschool Restricted-Use Data File.

# Standard Error Tables to Indicator 3

## Knowledge and Skills of Young Children

**Table S-3-2. Standard errors for the percentage of children demonstrating proficiency in various cognitive and motor skills at about 2 years old, by selected child and family characteristics: 2003-04**

Characteristic	Percent of children demonstrating proficiency in cognitive skills				
	Receptive vocabulary	Expressive vocabulary	Listening comprehension	Matching discrimination	Early counting
<b>Total</b>	<b>0.38</b>	<b>0.53</b>	<b>0.42</b>	<b>0.39</b>	<b>0.14</b>
Sex					
Male	0.56	0.76	0.58	0.53	0.16
Female	0.38	0.59	0.50	0.48	0.20
Race/ethnicity					
White	0.40	0.63	0.52	0.49	0.21
Black	0.93	1.18	0.86	0.75	0.21
Hispanic	0.99	1.19	0.83	0.73	0.16
Asian	1.24	1.41	0.94	0.83	0.27
Pacific Islander	4.10	5.76	4.24	3.56	0.36
American Indian/Alaska Native	4.02	4.18	2.70	2.24	0.28
More than one race	0.98	1.60	1.36	1.35	0.57
Primary type of care arrangement					
No regular nonparental arrangement	0.50	0.70	0.56	0.52	0.17
Home-based care					
Relative care	0.70	1.04	0.84	0.78	0.29
Nonrelative care	0.72	1.00	0.81	0.76	0.29
Center-based care	0.69	0.99	0.84	0.82	0.47
Multiple arrangements	5.66	7.07	5.92	5.68	2.87
Parents' highest level of education					
Less than high school	0.97	1.28	0.92	0.78	0.13
High school diploma or equivalent	0.61	0.86	0.66	0.61	0.17
Some college	0.61	0.86	0.70	0.66	0.21
Bachelor's degree	0.66	1.11	0.99	0.98	0.47
Any graduate education	0.60	0.93	0.79	0.78	0.37
Mother's employment status					
Full-time (35 hours or more)	0.57	0.83	0.66	0.62	0.24
Part-time (less than 35 hours)	0.64	0.98	0.84	0.80	0.37
Looking for work	1.28	1.77	1.33	1.20	0.24
Not in labor force	0.56	0.77	0.63	0.60	0.21
No mother in household	4.59	6.99	5.93	5.54	2.84
Poverty status					
In poverty	0.85	1.11	0.81	0.72	0.18
At or above poverty	0.37	0.53	0.44	0.42	0.18
Socioeconomic status (SES)					
Lowest 20 percent	0.87	1.11	0.81	0.71	0.20
Middle 60 percent	0.48	0.68	0.55	0.51	0.17
Highest 20 percent	0.44	0.80	0.70	0.70	0.38

See notes at end of table.

**Table S-3-2. Standard errors for the percentage of children demonstrating proficiency in various cognitive and motor skills at about 2 years old, by selected child and family characteristics: 2003-04—Continued**

Characteristic	Percent of children demonstrating proficiency in motor skills					
	Skillful walking	Balance	Fine motor control	Uses stairs	Alternating balance	Motor planning
<b>Total</b>	<b>0.20</b>	<b>0.33</b>	<b>0.48</b>	<b>0.41</b>	<b>0.47</b>	<b>0.21</b>
Sex						
Male	0.26	0.43	0.52	0.44	0.47	0.20
Female	0.20	0.32	0.53	0.47	0.55	0.26
Race/ethnicity						
White	0.23	0.38	0.58	0.50	0.59	0.26
Black	0.40	0.66	0.94	0.79	0.87	0.37
Hispanic	0.42	0.69	0.76	0.65	0.66	0.27
Asian	0.40	0.66	0.92	0.73	0.77	0.29
Pacific Islander	1.32	2.26	3.94	2.95	3.18	1.21
American Indian/Alaska Native	0.71	1.30	1.16	0.92	1.07	0.46
More than one race	0.53	0.92	1.30	1.07	1.19	0.53
Primary type of care arrangement						
No regular nonparental arrangement	0.26	0.43	0.55	0.47	0.52	0.22
Home-based care						
Relative care	0.30	0.49	0.79	0.67	0.77	0.35
Nonrelative care	0.27	0.46	0.73	0.63	0.74	0.35
Center-based care	0.31	0.50	0.70	0.61	0.74	0.37
Multiple arrangements	1.70	2.97	3.41	2.92	3.29	1.62
Parents' highest level of education						
Less than high school	0.43	0.71	0.84	0.69	0.71	0.28
High school diploma or equivalent	0.31	0.50	0.69	0.59	0.65	0.27
Some college	0.29	0.49	0.67	0.57	0.64	0.29
Bachelor's degree	0.31	0.52	0.79	0.67	0.78	0.37
Any graduate education	0.36	0.61	0.80	0.68	0.77	0.35
Mother's employment status						
Full-time (35 hours or more)	0.25	0.42	0.65	0.56	0.66	0.31
Part-time (less than 35 hours)	0.28	0.47	0.70	0.58	0.66	0.30
Looking for work	0.48	0.81	1.04	0.85	0.91	0.37
Not in labor force	0.26	0.42	0.56	0.48	0.54	0.24
No mother in household	1.33	2.31	3.88	3.08	3.45	1.38
Poverty status						
In poverty	0.32	0.53	0.70	0.60	0.67	0.28
At or above poverty	0.21	0.35	0.53	0.45	0.51	0.23
Socioeconomic status (SES)						
Lowest 20 percent	0.34	0.57	0.74	0.63	0.68	0.28
Middle 60 percent	0.24	0.40	0.59	0.51	0.58	0.26
Highest 20 percent	0.24	0.41	0.65	0.55	0.64	0.29

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Longitudinal 9-month-2-year Restricted-Use Data File and Longitudinal 9-month-Preschool Restricted-Use Data File.

# Standard Error Tables to Indicator 3

## Knowledge and Skills of Young Children

**Table S-3-3. Standard errors for the average scores for selected language, literacy, mathematics, and motor skills, and percentage of children demonstrating proficiency in selected literacy, mathematics, and color identification skills at about 4 years old, by selected child and family characteristics: 2005-06**

Characteristic	Language knowledge and skills		Literacy knowledge and skills			
	Average receptive vocabulary score	Average expressive vocabulary score	Average overall literacy score	Percent proficient at letter recognition	Average phonological awareness score	Average conventions of print score
<b>Total</b>	<b>0.03</b>	<b>0.02</b>	<b>0.14</b>	<b>0.55</b>	<b>0.02</b>	<b>0.03</b>
Sex						
Male	0.04	0.03	0.18	0.68	0.02	0.03
Female	0.05	0.02	0.20	0.76	0.03	0.04
Race/ethnicity						
White	0.05	0.03	0.21	0.79	0.03	0.04
Black	0.08	0.04	0.31	1.24	0.04	0.06
Hispanic	0.08	0.04	0.25	1.00	0.03	0.05
Asian	0.09	0.05	0.38	1.48	0.05	0.07
Pacific Islander	†	†	†	†	†	†
American Indian/Alaska Native	0.16	0.09	0.62	2.42	0.08	0.12
More than one race	0.12	0.05	0.51	1.88	0.08	0.10
Primary type of care arrangement						
No regular nonparental arrangement	0.10	0.04	0.26	1.00	0.04	0.05
Home-based care						
Relative care	0.09	0.05	0.31	1.23	0.04	0.06
Nonrelative care	0.13	0.07	0.33	1.31	0.05	0.06
Head Start	0.08	0.05	0.23	0.91	0.03	0.05
Other center-based care	0.04	0.03	0.22	0.84	0.03	0.04
Multiple arrangements	0.22	0.10	0.64	2.49	0.08	0.12
Parents' highest level of education						
Less than high school	0.12	0.06	0.27	1.07	0.04	0.06
High school diploma or equivalent	0.06	0.03	0.18	0.71	0.02	0.04
Some college	0.06	0.04	0.21	0.80	0.03	0.04
Bachelor's degree	0.07	0.04	0.28	1.12	0.04	0.05
Any graduate education	0.08	0.04	0.30	1.13	0.04	0.06
Mother's employment status						
Full-time (35 hours or more)	0.05	0.03	0.21	0.82	0.03	0.04
Part-time (less than 35 hours)	0.07	0.04	0.24	0.94	0.03	0.05
Looking for work	0.14	0.07	0.39	1.55	0.05	0.08
Not in labor force	0.07	0.03	0.25	0.96	0.04	0.05
No mother in household	0.33	0.23	0.80	3.19	0.10	0.16
Poverty status						
In poverty	0.06	0.03	0.17	0.68	0.02	0.04
At or above poverty	0.03	0.02	0.16	0.60	0.02	0.03
Socioeconomic status (SES)						
Lowest 20 percent	0.07	0.04	0.20	0.78	0.03	0.04
Middle 60 percent	0.04	0.03	0.14	0.55	0.02	0.03
Highest 20 percent	0.07	0.03	0.28	1.06	0.04	0.05

See notes at end of table.

**Table S-3-3. Standard errors for the average scores for selected language, literacy, mathematics, and motor skills, and percentage of children demonstrating proficiency in selected literacy, mathematics, and color identification skills at about 4 years old, by selected child and family characteristics: 2005–06—Continued**

Characteristic	Mathematics knowledge and skills		Percent scoring 10 out of 10 in color knowledge	Average fine motor skills score
	Average overall mathematics score	Percent proficient in numbers and shapes		
<b>Total</b>	<b>0.15</b>	<b>0.75</b>	<b>0.84</b>	<b>0.02</b>
Sex				
Male	0.19	1.00	1.11	0.04
Female	0.18	0.93	1.29	0.04
Race/ethnicity				
White	0.21	0.99	1.11	0.03
Black	0.34	1.85	2.44	0.06
Hispanic	0.27	1.48	1.79	0.06
Asian	0.32	1.52	2.36	0.09
Pacific Islander	†	†	†	†
American Indian/Alaska Native	0.83	3.33	3.83	0.18
More than one race	0.56	2.71	2.97	0.11
Primary type of care arrangement				
No regular nonparental arrangement	0.32	1.63	2.04	0.05
Home-based care				
Relative care	0.31	1.69	2.58	0.07
Nonrelative care	0.45	2.26	2.72	0.09
Head Start	0.31	1.79	2.55	0.07
Other center-based care	0.20	0.91	1.19	0.04
Multiple arrangements	0.71	4.67	5.44	0.23
Parents' highest level of education				
Less than high school	0.38	2.07	2.75	0.09
High school diploma or equivalent	0.24	1.44	1.61	0.04
Some college	0.22	1.13	1.17	0.04
Bachelor's degree	0.21	1.04	1.68	0.08
Any graduate education	0.24	1.08	1.48	0.05
Mother's employment status				
Full-time (35 hours or more)	0.18	0.90	1.09	0.05
Part-time (less than 35 hours)	0.26	1.24	2.06	0.05
Looking for work	0.58	3.00	3.83	0.11
Not in labor force	0.27	1.40	1.42	0.04
No mother in household	1.02	6.85	8.37	0.21
Poverty status				
In poverty	0.22	1.39	1.76	0.05
At or above poverty	0.16	0.76	0.91	0.03
Socioeconomic status (SES)				
Lowest 20 percent	0.29	1.73	2.14	0.06
Middle 60 percent	0.17	0.94	1.06	0.03
Highest 20 percent	0.22	0.95	1.50	0.05

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Longitudinal 9-month–Preschool Restricted-Use Data File.